

**CLAIMS**

What is claimed is:

- 1           1.       A method for assigning an internal port address to uniquely identify a port  
2 associated with a routing processor of a network device associated with, and having a location  
3 within, a system, comprising:  
4                 allocating a location section of the internal port address corresponding to the  
5 location of the network device;  
6                 allocating a routing processor section of the internal port address corresponding to  
7 a routing processor associated with the routing processor; and  
8                 allocating a port section of the internal port address corresponding to the port.
- 9           2.       The method of claim 1, wherein allocating a location section further comprises  
10 allocating a shelf section of the internal port address corresponding to the location of the network  
11 device within a shelf.
- 12           3.       The method of claim 2, wherein  
13                 the network device is associated with at least one geographical locator indicator;  
14 and  
15                 the shelf section is derived from the geographical locator indicator.
- 16           4.       The method of claim 1, wherein allocating a location section further comprises  
17 allocating a slot section of the internal port address corresponding to the location of the network  
18 device within a slot.
- 19           5.       The method of claim 4, wherein the slot is located within a shelf.

6. The method of claim 4, wherein  
the network device is associated with at least one geographical locator indicator;  
and  
the shelf section is derived from the geographical locator indicator.

7. The method of claim 1, wherein  
the routing processor is associated with a PCI slot ID; and  
the routing processor section is derived from the PCI slot ID.

8. The method of claim 1, wherein the network device is a line card.

9. A method for mapping an internal port address comprising a location section, a  
routing processor section and a port section to a network protocol address, comprising:

mapping the location section to a first selected section of the network protocol  
address;

mapping the processor section to a second selected section of the network  
protocol address; and

mapping the port section to a third selected section of the network protocol  
address.

10. The method of claim 9, wherein the location section further comprises a shelf  
section and a slot section.

11. The method of claim 9, wherein the network protocol address is a Fibre Channel  
address comprising a Domain ID field, an Area ID field and a Port ID field.

1           12.    The method of claim 11, wherein the first selected location corresponds to a  
2 selected portion of the Area ID field.

1           13.    The method of claim 11, wherein the first selected location corresponds to a  
2 selected portion of the Area ID field and a selected portion of the Port ID field.

1           14.    The method of claim 11, wherein the second selected location corresponds to a  
2 selected portion of the Area ID field.

1           15.    The method of claim 11, wherein the second selected location corresponds to a  
2 selected portion of the Area ID field and a selected portion of the Port ID.

1           16.    The method of claim 11, wherein the third selected location corresponds to a  
2 selected portion of the Port ID field.

1           17.    A method of routing a data frame from a source device utilizing a first protocol  
2 over a network utilizing a second protocol to a target device port utilizing a third protocol and  
3 associated with an internal port address, comprising:

4                   delivering the frame to the internal port address.

1           18.    The method of claim 17, wherein the first protocol is a different protocol from the  
2 third protocol, further comprising:

3                   translating the data frame from the first protocol to the third protocol.

1           19.    The method of claim 17, wherein the first protocol is a different protocol from the  
2 second protocol, further comprising:

3                   encapsulating the data frame over the second protocol;  
4                   transmitting the encapsulated data frame over the network; and  
5                   decapsulating the data frame.

1           20.    The method of claim 19, wherein the first protocol is a different protocol from the  
2 third protocol, further comprising:

3                   translating the data frame from the first protocol to the third protocol.

1001604-10601  
T.0909.405T.001